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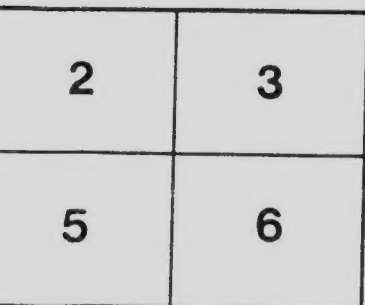
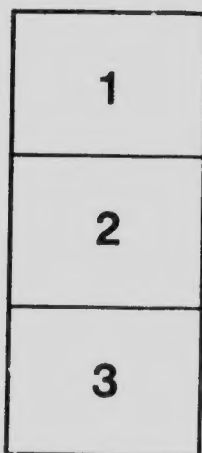
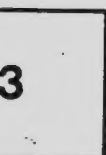
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EVERY GARDENER HIS OWN SEED GROWER

PART 1

SAVE NOW

TWO BEETS, TWO CARROTS, TWO PARSNIPS, TWO CABBAGES,
TWO TURNIPS, FIVE ONIONS, AND THREE PLANTS
OF CELERY FROM THE WINTER'S SUPPLY

PLANT THESE IN THE SPRING OF 1918

AND ENOUGH SEED SHOULD BE OBTAINED THAT YEAR FOR THE NEEDS OF A
HOME OR VACANT LOT GARDEN, IN 1919

SEED WILL BE SCARCE IN 1918. IT WILL BE SCARCER IN 1919.
MAKE SURE OF A SUPPLY BY GROWING YOUR OWN

DOMINION EXPERIMENTAL FARMS
SPECIAL CIRCULAR NO. 12

J. H. GRISDALE, B. AGR.,
DIRECTOR

W. T. MACOUN,
DOMINION HORTICULTURIST

VALUE OF HOME GROWN SEED.

MANY persons in Canada save vegetable seed every year and find it profitable to do so. The seed they grow themselves often germinates better than that which they buy and they know that their own seed is from the kind, variety or strain of vegetable which they would like to have again next year. Many market gardeners grow their own strains of tomatoes, melons, beans, peas, corn, etc. These are, however, all annual crops from which seed can be gathered the same year that it is planted. Comparatively few people grow their own seed of beets, carrots, celery, cabbage, onions, parsnips, etc., which require two years to produce seed; but just as satisfactory results can be obtained from these as from the annual vegetables.

Canadians have been dependent on other countries for most of their seed of biennial vegetables as they have been, to a large extent, with the annual kinds also, but the supply of seed from Europe, whence such seeds mainly come, is now very uncertain and, as it is quite easy to grow one's own seed it would seem desirable to do so, not so much for the money that would be saved as for the satisfaction of growing the seeds and knowing that they will be available at planting time. In order to encourage the production of home grown seed during this scarcity, prizes might be offered by the different Horticultural Societies and Vacant Lot Associations for the best seed plants.

During the years 1915, 1916 and 1917, more attention was paid to the growing of vegetable seed at the Experimental Farm, Ottawa, than in previous years, and considerable information has been gathered from the experiments tried. From the results obtained the following recommendations are made with confidence that, if the directions are followed, the home gardener will feel well repaid for the little trouble and labour involved. It is not claimed that as good results will be obtained as from carefully selected seed stocks and it is not recommended to continue growing seeds without selection from year to year, but while there exists such uncertainty in regard to the supply of good seed, it would seem to be worth the grower's while to grow his own seed.

GENERAL DIRECTIONS FOR GROWING BIENNIAL VEGETABLE SEEDS.

The ordinary garden soil or that found on the vacant lot will be found satisfactory in growing vegetable seeds and, while soil that is fertile and in good condition will give the best results, no special kind of soil or manure is necessary.

After the roots or plants have been set out in the garden, keep the surface soil loose and the ground free of weeds, in order to make the conditions as favourable as possible for strong growth. If there is danger of the plants being broken down, as there will be in the case of cabbage and celery and perhaps some of the others, a wooden stake should be driven down near the plant and the latter tied to it. The space required for plants of beet, cabbage, carrot, parsnip and turnips to develop is from 2 x 3 to 3 x 3 feet, for celery about 1 x 3 feet, and for onions about 6 inches by 2 to 3 feet. *One row of seed plants across one end of a twenty-five foot plot will take up little room and will be sufficient to grow more than enough of the seed that would be required of, at least, seven kinds of vegetables.* Parsnips and carrots make the sturdiest plants, hence these might be planted at each end of the row, which might be planted thus: 2 parsnips, 2 turnips, each 2 feet apart; 3 celery each 1 foot apart; 5 onions each 6 inches apart; 2 cabbages, 2 carrots, each 2 feet apart. Between this row of seed plants and the first row of vegetables there should be about three feet.

After the seed is ready to harvest, the sooner it is harvested, dried and cleaned, the better. Care should be taken that when drying there is a good circulation of air through the seed heads or pods so that they will not mould. When cleaned, put in paper bags or envelopes and keep in a dry place until spring. As mice are very fond of some kinds of seed see that they are safe from them.

The following table will give some idea of the probable seed yields per plant of the different kinds, the approximate number of seeds per ounce, and the amount of seed required for a hundred foot row. It is sometimes necessary to make more than one sowing and sufficient seed is suggested to make two sowings, if necessary. The figures given are based on results obtained at the Experimental Farm, Ottawa.

Kind of Vegetable.	Yield per plant, in ounces.	Approximate number of seeds per ounce.	Quantity of seed usually recommended for 100 ft. row.
Beet.....	2½ to 5½	1,500 to 1,900	2 to 3 ounces.
Cabbage.....	2 to 5	7,500 to 8,500	75 plants.
Carrot.....	1½ to 2½	22,000	½ to 1 ounce.
Celery.....	1 to 2½	70,000	250 plants.
Onions.....	½ to 1	7,000 to 10,000	½ to 1 ounce.
Parsnip.....	2 to 4	5,000 to 7,000	½ to 1 ounce.
Turnip.....	5 to 9	13,000	½ ounce.

Beets.—One good beet will produce more than enough seed for an average vacant lot or city garden. Before the winter's supply is used up, select two well-shaped specimens, in case anything should happen to one, and set aside until spring, making sure that the beet is of good, dark colour by taking a small piece out. When the soil is ready for seeding, plant the beet deep enough in the ground so that the top will be slightly below the surface. The flower stalks will soon be thrown up and when the plant is well grown it is desirable to tie the stalks loosely to a stake as they are liable to be broken down. Most of the seed will ripen at one time. When the seed begins to turn brown and before it is quite ripe, cut the plant and tie up for a few days to dry thoroughly, then, with a light stick, thresh off the seed and blow clean, and keep dry until spring.

Cabbage.—One head of cabbage will produce more than enough seed for the part of a city lot which is likely to be used for this vegetable. Save two solid heads and as soon as the ground is ready in the spring, plant about one-third of the head in the ground, and make a slit with a knife cross-wise over the top of the head, which will give the seed stalks a better chance to push out. In a short time these will do so and soon the plant will be in flower, pods will be formed and seed will develop. It is necessary to plant, at least, two cabbages as the flowers of one must be crossed with those of another in order to get pods well filled with seeds on either. This cross-pollination is done by insects. It is more satisfactory to plant the whole cabbage with the root attached, as there is less danger of the head rotting when this is done. When the roots are left on, the head simply rests on the soil, the roots only being planted. Good seed can be grown from the stump or root after the head has been removed, though this method is not recommended. Where only a small quantity of seed is grown the earliest ripe pods can be cut off as they turn yellow and the others as they mature. The seed is beaten out when dry, and cleaned.

Cauliflower.—As in most parts of Canada it is not possible to carry cauliflower plants over the winter the seed of this vegetable is more difficult to grow than most kinds, but plants started early will, in some places, go to seed if the heads are left uncut. Sometimes cauliflower seed is grown in a greenhouse.

Carrot.—One carrot will produce enough seed for a home garden. Save two shapely ones and in the spring plant as recommended for beets. The seed ripens much more unevenly than the beet and it is necessary to harvest each head as the seed gets ripe. Keep these clusters of seeds in a dry, airy place, and, when the seed is thoroughly dry, rub or beat out clean and keep dry until spring.

Celery.—One plant will produce enough seed for the home garden, but as disease sometimes attacks them it would be safer to plant three. At Ottawa, plants of both early and late varieties have been kept over winter outside by opening a trench just before severe frost and putting the plants close together and deep enough so that the tops are about level with the surface of the ground. A heavy layer of about a foot of straw is put over the tops and then soil thrown over to a depth of about fifteen inches. Even if the plants kept in the house or outside over winter have nothing but the heart or inner stalks left in good condition by spring, they will produce seed of good quality.

Plant in the spring about the depth the plant was when taken up in the autumn. It will not be long before the seed stalk will be thrown up. The seed does not all ripen at the same time but as seed will give good results even if harvested a little on the green side, the heads should be cut before much of the earliest ripe seed drops. When, however, there is the crop of only one plant to harvest, the seed can be gathered as it ripens. If the plant is cut before the seed is ripe it should be hung up to dry. Celery shells easily when the seed is ripe and as it is very valuable, loss should be avoided.

Onions.—A few well-shaped, firm onions should be saved for seed purposes. They should be planted out early in the spring about 6 inches apart in the row. If the onions have sprouted, the sprout should be cut off when being planted as straighter stalks will be thrown up if this is done. The upper side of the bulbs should be an inch or two below the surface of the ground after being planted. This will protect them from spring frosts. When the plants have grown sufficiently they should be banked up about 6 inches to help support the plants when the tops become heavy with flowers and seed. When the seed stalks show yellow near the ground the seed balls are cut off with about two inches of the stalk attached. The heads or seed balls are then spread out to dry and later the seed is threshed out. It is important to dry onion seed as rapidly as possible and to keep it dry.

Parsnip.—The parsnip is treated much as the carrot and it is surprising to a beginner in growing seeds to find how much seed can be produced from one root. In saving a parsnip for seed, select one that is the most free from side roots and one of the shortest and thickest available. There is a worm which is liable to eat the parsnip seed before it is ripe but the worms can be picked off by hand before they do much harm if one is on the lookout for them.

Salsify.—Save two or three plants of salsify for seed and plant and treat like the other roots.

Turnip.—Select two of the best shaped, sound turnips and set aside for seed purposes. The roots are planted as the carrot, beet, onion and parsnip and seed harvested when the pods turn yellowish-brown.

Further information in regard to the growing of seeds will be found in Bulletin No. 23, Second Series,—The Growing of Field Root, Vegetable and Flower Seeds in Canada. For a copy write the Publications Branch, Department of Agriculture, Ottawa. It is proposed to publish a pamphlet shortly on the growing of seeds of vegetables which mature their seeds in a single season. This will be distributed as soon as printed.



